

REMARKS

The undersigned, a pro-se applicant, respectfully requests that if the Examiner finds patentable subject matter disclosed in this application, but feels that applicant's present claim is not entirely suitable, the Examiner draft one or more allowable claim for applicant.

This case has been carefully reviewed and analyzed in view of the Official Action dated February 13, 2001.

The Examiner has objected to the drawings because of informalities. Red-lined photocopies of the drawings for figures 1 and 4 are submitted for the Examiner's approval. It is respectfully requested that the submission of the formal drawings be deferred until the notice of allowance is received.

Further, the Examiner has objected to claim 7 because of informalities. Claim 7 has been canceled and replaced with new claim 8 in order to avoid this objection. However, if the new claim 8 still fails to comply with the requirement, an Examiner's amendment is earnestly solicited.

Furthermore, the Examiner has rejected claim 7 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 has been canceled and replaced with new claim 8 in order to avoid this objection. However, if the new claim 8 still fails to comply with the requirement, an Examiner's amendment is earnestly solicited.

Moreover, the Examiner has rejected claim 7 under 35 U.S.C. 103 as being unpatentable over Lichtwardt in view of Sakakibara et al and Suran et al. However, it is respectfully requested that this rejection be withdrawn in light of the following

reasons:

1. Convenience

- a. For the Lichtwardt reference, its structure must be mounted within a car at the time when the car is assembled and its electrical circuit must be connected with the electrical circuit of the car, so that anyone who wants to have the Lichtwardt system can use it only if they buy the car. However, the present invention can be easily inserted into a safety belt by a user.
- b. As with the Lichtwardt reference, the seat belt retractor according to Sakakibara et al must be mounted within a car at the time when the car is assembled. Hence, this reference suffers from the same drawback as the Lichtwardt reference.
- c. Similarly, the Suran et al reference must be mounted within a car at the time when the car is assembled. Thus, this reference also suffers from the same drawback as the Lichtwardt reference.

2. Purpose

- a. The Lichtwardt reference is designed for providing a minimal amount of slack in a shoulder portion of the seat belt when it is fastened over an occupant of the vehicle.
- b. The purpose of the Sakakibara et al reference is for tightening a seat belt when an automobile body undergoes acceleration or deceleration exceeding a predetermined value, so that the seat belt secures a passenger to a seat.
- c. The Suran et al reference aims at controlling the locking and unlocking

of seat belt retractors in a vehicle.

- d. The present invention is designed for providing a status for the review of the person hit by a car, the driver of the car, insurance company and the manufacturer of the car, and to record the pulling force of the safety belt caused by the impact and the direction of the impact so as to determine whether the driver has fastened the seat belt or not. Furthermore, in case of some accidents, the seat belt may be inappropriately released, so that there will be disputes from the responsibilities of the car manufacturer. The present invention thus provides a similar function to a black box for airplanes.

3. Manufacturing Costs

- a. As the Lichtwardt, Sakakibara et al and Suran et al references must be mounted when the car is being assembled and their electrical circuits must be connected with the electrical circuits of the car, they therefore require a lot of additional work and increasing the costs.
- b. The present invention is designed to be sold on the market so that anyone can buy it from an auto parts shop and easily install it into their own car as desired, so that the present invention is very low in costs compared with Lichtwardt, Sakakibara et al and Suran et al references.

4. Social Cost

The present invention can reduce the disputes resulting from car accidents so that lawsuits regarding these can be reduced or simplified.

Lichtwardt, the first reference cited by the Examiner, discloses tightening unit having a fastening plate, a pulling force recording unit for mounting to a fastening seat of the

safety belt, an impact status recording unit, a recording indication unit, wherein the pulling force recording unit comprises a clipping frame containing a fastening loop with one end protruded out from the sensing device, and the fastening status recording unit comprises an enumerating sensing switch, electrical signal and resistance of the above units are transferred to the record indication unit, wherein the tightening unit comprises an engaging element and a releasing button, and a partial of the releasing button is exposed laterally and the engaging element is adhered to the lateral face of the releasing button to elastically mount the fastening belt of the safety belt. However, this reference fails to disclose a sensing device for a safety belt comprising: (a) a tightening unit having a fastening unit, the tightening unit comprising an engaging element and a releasing button, and a partial of the releasing button being exposed laterally, the engaging element being adhered to lateral face of the releasing button to elastically mount a fastening plate of the safety belt, the engaging element comprising a fastening board having one end mounted with a rotating shaft having a twisting spring, reverse twisting of the twisted spring causing the fastening board to produce an engaging action; a pulling force recording unit for mounting to a fastening seat of the safety belt, the pulling force recording unit comprising a clipping frame and a mounting frame, said mounting frame containing a fastening loop with one end protruded out of said clipping frame and an elastic mounting unit capable of changing resistance value when a pulling force is exerted, said elastic mounting unit comprising an elongated plate, a circuit board having function of converting pulling force into resistance, a plurality of compression springs and a stopping gear assembly, said stopping gear assembly having a gearing element mounted with a peg being inserted with a twisting spring, said gearing element facing

a positioning ratchet, two ends of said peg being mounted perpendicularly with said clipping frame and said mounting frame, said gearing element being positioned to said ratchet when said elongated plate is pulled out, two ends of said compression springs respectively urging a spring support and a resisting plate such that said elongated plate is positioned in between said clipping frame and said mounting frame, said circuit board being mounted adjacent to said elongated plate, a conductive layer, a plurality of variable resistance layers, two parallel high impact conductive layers and a signal output connector being mounted on said circuit board, said variable resistance layers being parallel to said conductive layer, said variable resistance layers and said conductive layer being in contact with a spring plate, said conductive layers being further away from said spring plate; an impact status recording unit comprising a circuit board on which is mounted a pendulum which changes resistance value of the circuit board by swinging of the pendulum; a record indication unit comprising two time indication circuits, a time adjusting button, an impact force indication light, at least one battery, a plurality of ICs, and a signal line connector, the two time indication circuits recording time simultaneously and being controlled by a time indication button, one of the time indication circuits receiving an impact signal from the pulling force record unit and the impact status record unit when impact occurs, and the other time indication circuits receiving an impact signal from the pulling force record unit and the impact status record unit when impact occurs; and a fastening status recording unit comprising an enumerating sensing switch, and electrical signal and resistance of said units are transferred to the record indication unit. Hence, this reference can be clearly distinguished from the present invention.

Sakakibara et al, the second reference cited by the Examiner, discloses a seat belt retractor of automobile. Nevertheless, as the previous cited reference, the Sakakibara et al reference still fails to teach a sensing device for a safety belt comprising: a tightening unit having a fastening unit, the tightening unit comprising an engaging element and a releasing button, and a partial of the releasing button being exposed laterally, the engaging element being adhered to lateral face of the releasing button to elastically mount a fastening plate of the safety belt, the engaging element comprising a fastening board having one end mounted with a rotating shaft having a twisting spring, reverse twisting of the twisted spring causing the fastening board to produce an engaging action; a pulling force recording unit for mounting to a fastening seat of the safety belt, the pulling force recording unit comprising a clipping frame and a mounting frame, said mounting frame containing a fastening loop with one end protruded out of said clipping frame and an elastic mounting unit capable of changing resistance value when a pulling force is exerted, said elastic mounting unit comprising an elongated plate, a circuit board having function of converting pulling force into resistance, a plurality of compression springs and a stopping gear assembly, said stopping gear assembly having a gearing element mounted with a peg being inserted with a twisting spring, said gearing element facing a positioning ratchet, two ends of said peg being mounted perpendicularly with said clipping frame and said mounting frame, said gearing element being positioned to said ratchet when said elongated plate is pulled out, two ends of said compression springs respectively urging a spring support and a resisting plate such that said elongated plate is positioned in between said clipping frame and said mounting frame, said circuit board being mounted adjacent to said elongated plate, a conductive layer,

a plurality of variable resistance layers, two parallel high impact conductive layers and a signal output connector being mounted on said circuit board, said variable resistance layers being parallel to said conductive layer, said variable resistance layers and said conductive layer being in contact with a spring plate, said conductive layers being further away from said spring plate; an impact status recording unit comprising a circuit board on which is mounted a pendulum which changes resistance value of the circuit board by swinging of the pendulum; a record indication unit comprising two time indication circuits, a time adjusting button, an impact force indication light, at least one battery, a plurality of ICs, and a signal line connector, the two time indication circuits recording time simultaneously and being controlled by a time indication button, one of the time indication circuits receiving an impact signal from the pulling force record unit and the impact status record unit when impact occurs, and the other time indication circuits receiving an impact signal from the pulling force record unit and the impact status record unit when impact occurs; and a fastening status recording unit comprising an enumerating sensing switch, and electrical signal and resistance of said units are transferred to the record indication unit. Consequently, this reference is in no way similar to the present invention. Suran et al, the third reference, discloses an active seat belt control system with seat belt in-use sensor. Similarly, the Suran et al reference still fails to teach a sensing device for a safety belt comprising: a tightening unit having a fastening unit, the tightening unit comprising an engaging element and a releasing button, and a partial of the releasing button being exposed laterally, the engaging element being adhered to lateral face of the releasing button to elastically mount a fastening plate of the safety belt, the engaging element comprising a fastening board having one end

mounted with a rotating shaft having a twisting spring, reverse twisting of the twisted spring causing the fastening board to produce an engaging action; a pulling force recording unit for mounting to a fastening seat of the safety belt, the pulling force recording unit comprising a clipping frame and a mounting frame, said mounting frame containing a fastening loop with one end protruded out of said clipping frame and an elastic mounting unit capable of changing resistance value when a pulling force is exerted, said elastic mounting unit comprising an elongated plate, a circuit board having function of converting pulling force into resistance, a plurality of compression springs and a stopping gear assembly, said stopping gear assembly having a gearing element mounted with a peg being inserted with a twisting spring, said gearing element facing a positioning ratchet, two ends of said peg being mounted perpendicularly with said clipping frame and said mounting frame, said gearing element being positioned to said ratchet when said elongated plate is pulled out, two ends of said compression springs respectively urging a spring support and a resisting plate such that said elongated plate is positioned in between said clipping frame and said mounting frame, said circuit board being mounted adjacent to said elongated plate, a conductive layer, a plurality of variable resistance layers, two parallel high impact conductive layers and a signal output connector being mounted on said circuit board, said variable resistance layers being parallel to said conductive layer, said variable resistance layers and said conductive layer being in contact with a spring plate, said conductive layers being further away from said spring plate; an impact status recording unit comprising a circuit board on which is mounted a pendulum which changes resistance value of the circuit board by swinging of the pendulum; a record indication unit comprising two time indication circuits, a time

adjusting button, an impact force indication light, at least one battery, a plurality of ICs, and a signal line connector, the two time indication circuits recording time simultaneously and being controlled by a time indication button, one of the time indication circuits receiving an impact signal from the pulling force record unit and the impact status record unit when impact occurs, and the other time indication circuits receiving an impact signal from the pulling force record unit and the impact status record unit when impact occurs; and a fastening status recording unit comprising an enumerating sensing switch, and electrical signal and resistance of said units are transferred to the record indication unit. Thus this reference is irrelevant to the present invention.

Accordingly, even if the disclosures of the cited references are combined together, the combined disclosure still fails to disclose the presently claimed invention.

It is now believed that the subject Patent Application has been placed in condition of allowance, and such action is respectfully requested.

Respectfully submitted,

Anthony Dean Nugent *Hsu Yie Yeh*
1. Anthony Dean Nugent 2. Hsu, Yie-Yeh

(INVENTORS)

May 11, 2001

TECHNOLOGY CENTER 2800

MAY 11 2001

FAX COPY RECEIVED